

*Ugana piana*, nov.

♂. Uniform olive-brown, paler and shaded with ochreous beneath; reniform small and pale, orbicular formed by two curved lines, which in some examples are joined at both ends; a straight black line from the abdominal margin one-third from base to one-third from apex of fore wings, where it is sharply angled inwards on to the costa, and a waved and somewhat outwardly dentated black line just outside the straight line; a blackish suffused and indistinct discal band somewhat close to the margin, which contains a row of whitish dots on the veins; the dots run across both wings, but the blackish shade is confined to the fore wings; some very minute whitish dots close to the margin; marginal line black; cilia black, with a whitish basal line. Underside with two outwardly curved brown medial lines across both wings and a pale thick discal line.

Expanse of wings 2 inches.

Entebbe, Uganda; five examples.

There are two examples in the B. M. unnamed from Uganda and Sierra Leone, Quadrifid Drawer 42.

XIV.—*The Collections of William John Burchell, D.C.L., in the Hope Department, Oxford University Museum.*

IV. *On the Lepidoptera Rhopalocera collected by W. J. Burchell in Brazil, 1825-1830.* By J. C. MOULTON, of Magdalen College, Oxford.

[Continued from p. 20.]

VI. *NYMPHALINÆ* (continued).

*Phyciodes hera*, Cram., = *ithra*, Kirby.

28. 10. 25. = 1076. Minas Geraës. (As 635.)

30. 10. 25. = 1077. " " (In the forest). On the N.E. side of the arraial of São João de Nêpomuécina."

Bz. + 6. 11. 25. = 1078. "At Capitaõ Leite's." Minas Geraës.

6. 11. 25. 3 = 1079, 1080, 1081. Minas Geraës. "At Capitaõ Leite's."

Westwood's list only mentions two specimens of this date besides 1078.

Nos. 1080 and 1081 are unfortunately in a very bad state of preservation, the former being represented by a fore wing and hind wing, while only the hind wing of the latter now remains.

10. 11. 25. 2 = 1082, 1083. Minas Geraës.

10. 4. 27. = 1084. Near S. Paulo. A note dated 9. 4. 27 says that "These and the insects about this date were killed in cachaça and a little corrosive sublimate."

25. 8. 27. 2 = 1085, 1086. Ollaria to Rio Pardo.

1086 bears Westwood's number N. 81.

Bz. + p. 26. 8. 27. = 1087. R. Pardo to Cubatão. (As 735.)

27. 8. 27. 3 = 1088-1090. R. Pardo to Retiro.

Bz. + 27. 8. 27. = 1091.

Westwood's list adds another specimen captured on this date.

24. 10. 27. = 1092. Meiaponte to S. Joaquim (Joaq. Alves).

30. 10. 27. = 1093. Sapezal to Conceição.

5. 3. 28. = 1094. Goyaz. "Caught by the rio Vermelho, near the Carioca Aqueduct; by U[ongo]."

Bz. a. 24. 8. 28. = 1095. Retiro. "All at the rivulet near the house at Retiro."

Westwood's list (N. 81) gives an individual captured a. 24. 8. 27, which is probably a copyist's mistake for the date of 1095. He also mentions "one without a number."

*Phyciodes teletusa*, Godt.

904. I. 25. 10. 25. ♀ = 1096. Minas Geraës. "*P[apilio]*. At Discoberto, near João Pedro's house.

This specimen bears Westwood's number N. 87.

28. 10. 25. ♀ = 1097. Minas Geraës. (As 635.)

4. 11. 25. ♀ = 1098. Minas Geraës. (As 559.)

9. 3. 26. ♂ = 1099. Rio de Janeiro. This specimen bears Westwood's number "Nym. 89," and is the only one under this number.

Westwood's list (N. 87 and N. 89) agrees.

*Phyciodes sejona*, Schaus.

6. 8. 27. = 1100. "Campinas." Between Mogy Mirim and S. Paulo.

This specimen bears Westwood's number "Eryc.<sup>da</sup> 70,"

and is given in his list of Erycinidæ. Unfortunately it is in a very bad state of preservation, so that its determination cannot be quite certain. However, there are traces of certain markings on the underside which have led to its inclusion in this series.

28. 10. 27. 2 = 1101, 1102. S. Joaquim to Sapezál.

30. 10. 27. 3 = 1103, 1104, 1105. Sapezál to Conceição.

Bz. 30. 10. 27. = 1106. Sapezál to Conceição.

25. 8. 28. = 1107. Retiro to Goyavéira. "On the road."

This specimen bears Westwood's number "Nym. 91"; his list agrees.

Professor E. B. Poulton, F.R.S., and Mr. R. Trimen, F.R.S., have very kindly examined these specimens, and they agree that they conform to Schaus's description of *P. sejona*. Unfortunately the type is in America, so that comparison has been impossible. The species is remarkably near *P. teletusa*, and, in fact, may turn out eventually to be only a more northern form of it. The whole genus is composed of such variable species that it is most desirable that breeding should be undertaken on a large scale to establish each species on a satisfactory basis.

*Phyciodes burchelli*, sp. n.

Bz. 24. 10. 27. = 1108. Meiaponte to S. Joaquim (Joaq. Alves). The type of the species.

28. 10. 27. = 1109. S. Joaquim to Sapezál.

30. 10. 27. = 1110. Sapezál to Conceição. This specimen bears Westwood's number N. 90.

25. 8. 28. 3 = 1111, 1112, 1113. Retiro to Goyavéira. "On the road."

Westwood's list (N. 90) agrees.

This species is unnamed in the British Museum, where it is placed next to *P. teletusa*; the Godman-Salvin Collection contains a long series also unnamed from Chapada and South Brazil, and a few specimens exist in the collection of Mr. H. Grose-Smith.

(1108.) *Upperside*. Ground-colour dark fuscous-brown; a wide orange-tawny band from inner margin of hind wing to near costa of fore wing, broken at apex. *Fore wing*: from inner margin an orange-tawny band, the breadth of which is a little less than half the length of the inner margin, to a little above the third median nervule, leaving externally a narrow hind-marginal border of ground-colour, in middle of which are three orange-tawny lunular markings situated respectively

between the submedian nervure and the first median nervule, between the first and second median nervules, and just above the third median nervule. The orange-tawny band is broken off about the third median nervule by a narrow streak of ground-colour running obliquely from costa to centre of hind margin and widest at costal end, leaving an apical marking of orange-tawny which runs from the subcostal nervure to the second median nervule; it is widest in centre and is roughly triangular in shape. A faint orange spot at exterior end of cell. Cilia of the ground-colour. *Hind wing*: orange-tawny band of fore wing continued across hind wing, superiorly slightly broader and occupying a good half of the hind wing, and extending to inner margin, leaving a little wider hind-marginal border of ground-colour than in the fore wing. Exterior edge of orange band is marked by a row of faint ground-colour lunular markings which merge into the hind-marginal border at second subcostal nervule; hind-marginal border itself traversed by a series of linear orange-tawny lunules, one in each internervular space, the largest being above the first subcostal nervule. Cilia as in fore wing. Hind margin crenelated.

*Underside*. Light tawny ground-colour very much paler in hind wing, with brown subapical and hind-marginal markings. *Fore wing*: tawny ground-colour slightly darker towards middle and end of cell, a little beyond which is a dark brown oblique bar from end of first subcostal nervule to hind margin at end of second median nervule; outer edge of bar straight, inner edge concave, the hind-marginal end broadening out over anal angle. External to this bar a light fulvous one, almost broken in middle, the outer edge of which is irregularly defined, and wider towards hind margin. This is succeeded by a lilac-brown apical patch, with a short oblique narrow whitish mark on the costa. A narrow lunulated brown-fulvous edging to hind margin. Central portion dull orange-fulvous, corresponding to orange-tawny band of upperside. The apical markings are variable. *Hind wing*: basal part appears slightly darker through presence of very delicate and irregular light brown transverse lines. A hind-marginal band of lilac-brown, growing lighter towards each extremity about first subcostal nervule and about first discoidal nervule. In this band a connected series of whitish lunules from costa to anal angle; on inner edge of band five small dark brown inwardly pale-margined spots, of which the two middle (between the radial and second median nervule) are largest.

Exp. al. 31-36 mm. (type 33 mm.).

Type, specimen 1108 in Hope Department, University Museum, Oxford.

*Distribution* (based on six specimens taken by Burchell and on a series in Godman-Salvin Collection). Rio Tocantins, province of Goyaz; Chapala and South Brazil. In the British Museum there are five specimens (1 ♂ from Nauta, Upper Amazons, Peru, 3 ♂ 1 ♀ from Ecuador) which are very near it, if not actually the same species.

Compared with *P. cluvia*, G. & S. (Biol. Centr.-Amer., Rhopal. pl. xxi. figs. 21, 22), on the upperside *burchelli* bears a close resemblance to it, but the tawny lunular line in the hind margin of the hind wing in *burchelli* is wanting in *cluvia*, and the hind-marginal band of fuscous brown in *cluvia* does not reach the anal angle as in *burchelli*. The undersides are remarkably different: *cluvia* has a unicolorous tawny brown hind wing, and the fore wing is of the same colour except for two orange-tawny patches.

*P. teletusa*, on the other hand, is nearly related to *burchelli* on the underside as well as the upper.

*Phyciodes*<sup>2</sup> *claudina*, Esch.

10. 1. 26. = 1114. Rio de Janeiro. (As 670.)  
 31. 1. 26. = 1115. " (As 474.)  
 1. 3. 26. = 1116. " (As 960.)  
 7. 3. 26. 2 = 1117, 1118. Rio de Janeiro. "At Catombí."  
*Bz.* + 7. 3. 26. = 1119. " "  
 10. 3. 26. 2 = 1120, 1121. " "  
 13. 3. 26. = 1122. " "  
 20. 3. 26. 2 = 1123, 1124. Rio de Janeiro. "Along the Carioca Aqueduct."  
 1123 bears Westwood's number "Nymph. 85."  
*Bz.* 20. 3. 26. = 1125. Rio de Janeiro. "Along the Carioca Aqueduct."  
 3. 4. 26. = 1126. Rio de Janeiro. "Along the Carioca Aqueduct."

Westwood's list (N. 85 and N. 86) agrees. He placed this species and the succeeding two all together under these two numbers.

*Phyciodes* *liriopæ*, Cram.

- Bz.* 343. I. [14. 10. 25.] = 1127. Minas Geraës. "P[apilio]." Parahíba (on Oct. 12).  
*Bz.* 345. II. [15. 10. 25.] 2 = 1128, 1129. "P[apilio]. At the Discobérto do Antonio Velho."

- Bz. + 918. II. 25. 10. 25. 2 = 1130, 1131. Minas Geraës.  
 "P[apilio]. At Discoberto, near João Pedro's house."  
 Bz. + 1005. I. 27. 10. 25. = 1132. Minas Geraës. "P[a-  
 pilio]. At San João de Nepomucéna and on the road  
 from Discoberto."  
 Bz. 12. 3. 26. = 1133. Rio de Janeiro. "Aqueduct."  
 28. 10. 27. 3 = 1134, 1135, 1136. S. Joaquim to Sapezál.  
 30. 10. 27. 4 = 1137-1140. Sapezál to Conceição.  
 Bz. + 30. 10. 27. = 1141.  
 a. 24. 8. 28. = 1142. Retiro. "All at the rivulet near the  
 house at Retiro." (As 844.)  
 This specimen bears Westwood's number "Nym. 86."  
 Bz. + 26. 5. 29. = 1143. "Silva." Between Itabóca and  
 Baião; north of the Falls of Guariba.  
 p. 31. 5. 29. = 1144. Baião.  
 p. 31. 5. 39. = 1145. "Sylva." This date must be a slip  
 for 31. 5. 29. Baião.  
 It is, perhaps, worthy of note that "39" for "29" is the  
 only mistake of the kind so far detected among some 1200  
 specimens labelled by Burchell. A second will be found on  
 1221.  
 20. 9. 29. 2 = 1146, 1147. Pará. S.E. of S. Jozé.  
 Westwood's list (N. 85 and N. 86) agrees.

*Phyciodes fragilis*, Bates.

- a. 24. 8. 28. = 1148. At Retiro. "All at the rivulet near  
 the house at Retiro." (As 844.)  
 Westwood's list (N. 86) agrees, though he placed it in his  
 list of the preceding species.

*Phyciodes pedrona*, sp. n.

920. I. 25. 10. 25. = 1149. Minas Geraës. "P[apilio].  
 At Discoberto, near João Pedro's house."

The type of the species.

The specimen bears Westwood's number (N. 95); his list  
 agrees.

A single specimen exists, unnamed and without any data,  
 in the B. M. collection.

(1149.) *Upperside*. Dark fuscous-brown ground-colour  
 relieved with tawny-yellow spots, an irregular line of which  
 crosses the hind wing from costa to inner margin. *Fore*  
*wing*: from costa to inner margin a broken line of six  
 tawny-yellow spots; the first is situated on the costa about  
 the end of the second subcostal nervule, the next two between

upper radial and third median nervule; the remaining three continue the line 1 millimetre nearer the base, one spot below each median nervule, the middle one being slightly the largest: this line is succeeded externally by a similarly irregular line of five smaller spots; the first is very faint and is placed between the first and second radial nervules. Close to hind margin between third and second median nervules a tawny yellow spot. Basal portion relieved by smaller orange-tawny spots. Cilia of ground-colour. *Hind wing*: from centre of costa to a point two-thirds the length of inner margin a concave line of seven internervular tawny-yellow spots. Halfway between this and hind margin a similar row of six small dark brown inwardly tawny-margined spots—no spot on costa in this series. Not far from hind margin a row of seven almost linear tawny-yellow lunules. A few small orange-tawny spots in basal region. Cilia as in fore wing.

*Underside*. Bright tawny-yellow ground-colour, marked by dark brown patch between median nervules in fore wing. *Fore wing*: from a point on costa between first and second subcostal nervules to third median nervule a narrow pale ochreous macular stripe, continued to inner margin 1 millimetre nearer to base, broadening at inner margin towards anal angle. This stripe is succeeded by a large apical patch of slightly richer tawny yellow. Below this and between median nervules a dark fuscous-brown patch prolonged upwards by two similarly coloured spots between radial nervules, and downwards by a small spot below first median nervule. A line of three pale ochreous spots parallel to hind margin from below second radial nervule to below second median nervule; the middle one occupies centre of fuscous-brown patch. External to patch and bordering on hind margin between third and second median nervules a large pale ochreous spot. A faint hind-marginal border of dark tawny lunules. *Hind wing*: basal region pale ochreous, with irregular broken sub-basal and median indistinct yellow macular streaks. Exterior region tawny yellow, relieved by a line of small dark fulvous inwardly yellow-margined internervular spots from apex to anal angle. Hind marginal row of fulvous inwardly yellow-margined lunules. Cilia of slightly lighter ground-colour than on upperside.

Exp. al. 25 mm.

Type, specimen 1149 in Hope Department, University Museum, Oxford.

*Distribution* (based on this single specimen). The southern part of Minas Geraës, near Rio.

The upper surface of *P. pedrona* is near to that of *P. tharos*,

Drury. Compared with a single specimen in the Hope Collection from Mexico, *tharos* is 5 mm. larger in expanse of wings; the spots of the hind wing are larger, and two large spots appear in the basal region which are unrepresented in *pedrona*. The fore wing of *tharos* differs considerably in having a well-marked and regular submarginal row of six spots, while *pedrona* has a faint and irregular series of five; *tharos*, again, has a pale oblique streak beyond cell and another broken pale oblique streak from cell to inner margin, both of which are absent in *pedrona*. There are also more fulvous markings at base in *tharos*. On the underside of fore wing three fuscous-brown markings appear in *tharos*, one along the outer edge of cell, another just above anal angle, and a third in centre of inner margin, in contrast to the single submedian fuscous-brown marking in *pedrona*. The two species are, on the whole, very markedly different.

In the British Museum a single specimen of *pedrona* is placed next to *P. simois*, Hew. (Pernambuco and "Brazil"). In *simois* a larger black marking is apparent behind the lower part of the hind margin; but rows of white spots take the place of the pale yellow spots in *pedrona*, and in the fore wing of *simois* there are white and rufous spots at the apex and outer margin which are absent in *pedrona*.

*Eresia eunice*, Hew.

16. 6. 29. = 1150. Pará.

29. 7. 29. = 1151. Pará.

Specimen 1151 bears Westwood's number A. 5 and "*Eresia Esora*"; his dates agree, but he gives this species the name of *Eresia esora* and places it among his list of *Acræinæ*.

*Eresia langsdorffi*, Godt.

28. 10. 25. = 1152. Minas Geraës. (As 635.)

This specimen bears Westwood's number A. 6, and "*Eresia Langsdorffi*."

29. 10. 25. = 1153. Minas Geraës. "In the forest on the S.E. side of S. João de Nêpomucéna."

4. 11. 25. = 1154. Minas Geraës. (As 559.)

This specimen bears Westwood's number A. 6.

10. 11. 25. = 1155. Minas Geraës.

6. 12. 25. = 1156. Rio de Janeiro. On the Corcovádo Mountain. (As 667.)

8. 2. 26. = 1157. Organ Mountains. (In a ride to the Cattle Pounds and the Milho Roça.)

1. 12. 26. = 1158. Santos.

Westwood's list omits 1155 and 1156, but otherwise agrees both in dates and names, although this species is also placed, as A. 6, among the *Acraëinæ*.

*Eresia perna*, Hew.

28. 10. 25. ♂ = 1159. Minas Geraës. (As 635.)

This specimen bears Westwood's number A. 7, and "*Perna*."

29. 10. 25. = 1160. Minas Geraës. In the forest on the S.E. side of S. João de Nepomucéna.

Westwood's dates and names agree. This also appears, as A. 7, in his list of *Acraëinæ*.

*Eresia clara*, Bates.

18. 12. 29. = 1161. "*Silvatica*." Pará. Rivulet above Arsenal.

This specimen bears Westwood's number (N. 88), and his list agrees.

*Euptoieta hegesia*, Cram.

26. 1. 26. 3 = 1162, 1163, 1164. Rio de Janeiro. Morro de Ladéira and Catombý. (As 672.)

28. 3. 29. = 1165. Porto Real (Nacional).

Bz. + 2 p. 28. 5. 29. 3 = 1166, 1167, 1168. A Campo Bank; between Itabóca and Baião.

2 p. 28. 5. 29. = 1169. A Campo Bank; between Itabóca and Baião.

Westwood's list (N. 63) gives one more specimen of this last date, but otherwise agrees. He named it "*Atella Hegesia*." As none of the above specimens bear Westwood's number, we may conclude that it was on the missing specimen.

*Agraulis (Dione) vanillæ*, Linn.

Bz. + 902. I. 25. 10. 25. = 1170. Minas Geraës. "*P[apilio]*". At Discoberto, near João Pedro's house."

This specimen bears Westwood's number A. 20. Given in Westwood's list.

4. 11. 25. = 1171. Minas Geraës. (As 559.)

6. 12. 25. = 1172. Rio de Janeiro. On the Corcovádo Mountain. (As 667.)

Bz. + a. 25. 2. 26. = 1173. "*Frexais*" on the Brazilian

label and "Frexaes" on the English label. Organ Mtns. Burchell sometimes wrote "Frexaes" for "Frechál."

*Bz.* + a. 25. 2. 26. = 1174. "Frixais" on the Brazilian label and "Frexal" on the English label. Organ Mtns. Given in Westwood's list.

a. 25. 2. 26. = 1175. "Frexaes." Organ Mtns.

p. 25. 2. 26. 4 = 1176-1179. Organ Mtns. Between Frechál and Magé. Burchell sometimes wrote "Frexaes" for "Frechál." One specimen given in Westwood's list.

*Bz.* + p. 25. 2. 26. = 1180. Between Frechál and Magé.

1. 3. 26. = 1181. (As 960.)

12. 3. 26. = 1182. Rio de Janeiro. "Aqueduct."

13. 3. 26. = 1183. Rio de Janeiro.

*Bz.* 13. 3. 26. = 1184. Rio de Janeiro.

20. 3. 26. = 1185. Rio de Janeiro. "Along the Carioca Aqueduct."

*Bz.* 27. 4. 27. = 1186. Vicinity of S. Paulo.

27. 4. 27. = 1187. Vicinity of S. Paulo.

*Bz.* 9. 6. 27. = 1188. Vicinity of S. Paulo.

19. 6. 27. = 1189. Vicinity of S. Paulo. Given in Westwood's list.

*Bz.* + 19. 7. 27. = 1190. Vicinity of S. Paulo. Given in Westwood's list.

29. 1. 29. = 1191. Porto Real (Nacional). "Caught on the bank of the Tucantins, while measuring the baseline."

*Bz.* 29. 1. 29. = 1192. Porto Real (Nacional). "Caught on the bank of the Tucantins, while measuring the baseline."

*Bz.* 16. 2. 29. = 1193. Porto Real (Nacional). "Papiliones (3) caught on the flowers of a Malva in the backyard." (See 660.) Given in Westwood's list.

*Bz.* 19. 2. 29. = 1194. Porto Real (Nacional).

19. 2. 29. = 1195.

4. 3. 29. = 1196. " "

7. 3. 29. = 1197. " "

*Bz.* 23. 3. 29. = 1198. " "

27. 3. 29. = 1199. " "

Westwood's list (A. 20) only gives six specimens in the whole of the above series. He placed it among the *Acræinæ* and named it "*Vanilla*." Probably a supplementary list exists on a small slip of paper, as in the case of *Agraulis juno*, but this has yet to be found.

*Agraulis (Dione) juno*, Cram.

Bz. 553. V. [19. 10. 25.] 4 = 1200-1203. Minas Geraës.  
 "Papilionida." At Discoberto, Oct. 15 and 21.

Westwood's list, in his own handwriting, gives five, indicating that one specimen has disappeared or has lost its label.  
 Bz. + 819. I. 23. 10. 25. = 1204. Minas Geraës. "Papilio." At Discoberto, Oct. 22 and 24.

This specimen bears Westwood's number A. 22.

Bz. + 901. II. 25. 10. 25. 2 = 1205, 1206. Minas Geraës.  
 "P[apilio]. At Discoberto, near João Pedro's house."

30. 10. 25. = 1207. Minas Geraës. "(In the forest). On the N.E. side of the arraial of São João de Nepomucena."

4. 11. 25. 2 = 1208, 1209. Minas Geraës. (As 559.)

The list in Westwood's handwriting, which is probably perfect, gives three specimens of this date.

Bz. + 7. 11. 25. = 1210. Minas Geraës.

16. 2. 26. 2 = 1211, 1212. Organ Mountains.

29. 1. 27. = 1213. Vicinity of S. Paulo.

24. 10. 27. = 1214. Meiaponte to S. Joaquim (Joaq. Alves).

Bz. + 28. 7. 29. = 1215. Pará. "28. 7. 27" in Westwood's list.

The data of this species not only appear, as A. 22, in Westwood's *Acraënae*, but also separately on a small slip of paper. In the first of these lists, which is very incomplete and in a clerk's handwriting, he describes the species as "like *Vanille*, but darker," while the second list, which is altogether in Westwood's writing, and probably perfect, bears the heading "Dark under winged Fritillary."

*Colænis julia*, F.

Bz. 144. II. [16. 8. 25.] 2 = 1216, 1217. Rio de Janeiro.  
 "Pap[ilio]. Above the Teresa Convent; and on the woody hilly [hills] along the Aqueduct."

Bz. 334. I. [15. 10. 25.] = 1218. Minas Geraës. "Papilio. At the Discoberto do Antonio Velho . . . (144.)"

This number (144) refers to specimens 1216, 1217, which Burchell thus recognized as the same species. This is given in Westwood's list.

Bz. 554. III. [19. 10. 25.] 3 = 1219, 1220, 1220 A. Minas Geraës. "Pap[ilio]." (As 1200.)

Bz. + 994. VIII. 27. 10. 25. 7 = 1221-1227. Minas Geraës. "Papilio. At San João de Nepomucena and on the road from Discoberto."

Opposite number 994 Burchell gives eight specimens dated

27. 10. 25, making no mention of specimen 1221, labelled in England 26. 10. 25, and also bearing the Brazilian number 994. The latter date is evidently a clerical error, and is interpreted above as 27. 10. 25. Compare 1145.

4. 11. 25. 2 = 1228, 1229. Minas Geraës. (As 559.)

29. 12. 25. = 1230. Rio de Janeiro. Catombí—Barra Vermélha—and Rio Comprido.

a. 25. 2. 26. = 1231. "Frexal." Organ Mountains. Burchell sometimes wrote "Frexal" for "Frechál."

7. 3. 26. 5 = 1232-1236. Rio de Janeiro. "At Catombí." This date is given in Westwood's list, but only for two specimens.

No. 1234 bears Westwood's number A. 16.

Bz. + 7. 3. 26. = 1237. Rio de Janeiro. "At Catombí."

10. 3. 26. = 1238. "

Bz. 10. 3. 26. = 1239. "

Bz. 12. 3. 26. = 1240. "Aqueduct."

Mentioned in Westwood's list.

12. 3. 26. 2 = 1241, 1242. Rio de Janeiro. "Aqueduct."

13. 3. 26. 3 = 1243, 1244, 1245. Rio de Janeiro. One specimen mentioned in Westwood's list.

16. 3. 26. = 1246. Rio de Janeiro. (As 647.)

20. 3. 26. 6 = 1247-1252. Rio de Janeiro. "Along the Carioca Aqueduct."

Bz. + 25. 8. 27. = 1253. Ollaríá to Rio Pardo.

25. 8. 27. = 1254.

3. 3. 28. = 1255. Goyaz. "Caught in the town by the rio Vermelho by C[ongo]."

28. 4. 28. = 1256. Goyaz. (As 748.) Mentioned in Westwood's list.

Bz. + 14. 4. 29. = 1257. Porto Real [Naçionale].

Bz. + 15. 4. 29. = 1258. Porto Real. "

12. 8. 29. = 1259. Pará.

Westwood's list (A. 16) only gives six specimens of this species in his list of *Acræiunæ*. His description of it is thus:— "*Cethosia?* orange red with oblique brown bar in f. w." We may surmise the existence of a second list, now missing, giving the remainder of the dates, as in the case of the previous species.

*Colænis phærusa*, Linn.

Bz. 14. 4. 27. = 1260. In the Campo beyond Bóá Mórte. Near S. Paulo.

This specimen bears Westwood's number A. 15, and his list adds another example, captured 13. 5. 29 at Carolina,

on R. Tocantins, between Porto Real and Pará. Westwood described this as a "*Cethosia* (*Carolina*?) red buff with brown bars and white spots on margin of h. w." He placed it, as A. 15, among the *Acraëinæ*.

*Metamorpha dido*, Linn.

12. 3. 26. = 1261. Rio de Janeiro. "Aqueduct."  
 17. 3. 26. = 1262. Rio de Janeiro. Along the Carioca Aqueduct. (See 917.) "*Papilio*: The green species frequents the tops of trees and flies generally high above reach." [This evidently refers to this species, though the specimen bearing the date 17. 3. 26 does not bear the no. 1057. The latter, however, is borne by a specimen of *Papilio agavus*, Drury.] Westwood's list gives one specimen bearing 1057 and two with 17. 3. 26. The former and one of the latter are now missing.  
 Bz. 20. 3. 26. = 1263. Rio de Janeiro. "Along the Carioca Aqueduct."  
 1. 4. 26. = 1264. Rio de Janeiro. "In the valley of Catumbi."

This specimen bears Westwood's number A. 19.

- Bz. + 1316. 17. 2. 29. = 1265. Porto Real. "Feeding on the flowers of the *Waltheria* bushes (v. H. 8632X)." (See 663.)

1316. 17. 2. 29. = 1266. As above.

Westwood made two lists of this species, in one of which he mentions only one specimen on this date, while four are recorded on the other.

2. 3. 29. = 1267. Porto Real.  
 7. 3. 29. = 1268. Porto Real. "The green papilio loses much of the beauty of its green color within a day or two after being caught." It is certain that the "green papilio" is *Metamorpha dido*, Linn., as Burchell gives the above note on a specimen dated 6. 3. 29. The specimen is now lost, but is mentioned by Westwood in his list of this species. See also 1262, where this *Papilio* is described as "the green species." The green pigment is not contained in scales, but exists between the two membranes of the wing, being almost certainly the blood or hæmolymp in a solid state, and the colour due to metachlorophyll or some other modified plant-pigment. Green markings caused in this manner are also found in *Victorina stelenes* and several true *Papilioninæ* of the *sarpedon* group, also in the *Pierine*

genus *Nepheronia*, although in this case the green colour is concealed by the opaque superficial scales. The rapid change of tint noted by Burchell is clearly associated with this unusual development of pigment between the wing-membranes, and it is probably caused by desiccation.

Bz. 9. 3. 29. = 1269. Porto Real.

10. 3. 29. = 1270. Porto Real. "Lepidoptera began to appear more numerous in the end of Feby, and since the beginning of this month they appear abundant."

Westwood's list mentions another specimen captured on this date.

Bz. + 13. 3. 29. = 1271. Porto Real.

18. 3. 29. = 1272. "

Bz. + 21. 3. 29. = 1273. "

23. 3. 29. 2 = 1274, 1275. "

Bz. + 23. 3. 29. = 1276. "

Bz. + 25. 3. 29. = 1277. "

Westwood's list does not mention any individual caught on this date, but one taken 22. 3. 29,—probably an erroneous rendering of 1277.

28. 3. 29. = 1278. Porto Real.

Bz. + 28. 3. 29. = 1279. Porto Real.

22. 4. 29. 2 = 1280, 1281. "

Bz. + 22. 4. 29. = 1282. "

7. 8. 29. = 1283. Pará.

Westwood's list adds two more individuals captured at Porto Real 26. 2. 29 and 6. 3. 29. See note on 1268.

The data of this species appear, as A. 19, in Westwood's list of *Acræinæ*. Opposite the very imperfect records Westwood had written "Ceth. Dido." Another list, on a small slip of paper, is in Westwood's handwriting, and this contains all the data here recorded except those of 1261. This separate list is headed "*Dido*."

[To be continued.]

### XV.—*The Char (Salvelinus) of Great Britain.*

By C. TATE REGAN, M.A.

FOUR species of Char have hitherto been described from the lakes of Great Britain: viz. *Salvelinus killinensis*, the Haddy of Loch Killin in Inverness-shire; *S. struanensis*, the Struan